Cornell Cooperative Extension | Cornell Vegetable Program

VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

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Managing Wireworms in Vegetable Crops Using Biocontrol Nematodes

Teresa Rusinek, Cornell Cooperative Extension, Eastern NY Commercial Horticulture Program

Wireworms are an increasing problem in root crop vegetable production. The adult stage of the wireworm, known as click beetles, prefers grassy fields for egg laying June through August. High levels of damage are often observed in subsequent years after a field is taken out of a grass-based cover crop when susceptible crops are grown. While wireworms primarily enjoy feeding on grasses, they will feed on many vegetable crops. Early season feeding on seeds or roots can result in reduced or uneven stands. In root crops such as sweet potatoes, wireworm feeding occurs later in the season so damage may go unnoticed until harvest time. Damage can occur for several years in the same field, as it can take up to five years for the wireworm to complete its lifecycle in the soil and emerge as an adult click beetle.

In conventional vegetable production there are a few insecticides that can be applied prior to, or at planting on select vegetable crops to reduce wireworm damage. In organic production however, growers must rely on cultural tactics to reduce damage. The lack of "rescue" options in organic production spurred the investigation of entomopathogenic nematodes (EPNs) as a potential biocontrol agent in the suppression of wireworm infestations. Retired Cornell entomologist Elson Shields and research assistant Tony Testa isolated a complex of New York native EPNs that are cold tolerant, persist in the

Damaged sweet potatoes from wireworm feeding. *Photo: Teresa Rusinek, CCE Eastern NY Commercial Horticulture Program*

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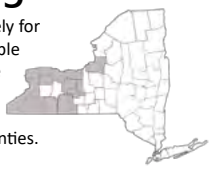
About VegEdge



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension partnership between Cornell University and CCE Associations in 14 counties.

The newsletter is a service to our enrollees and is intended for educational purposes, strengthening the relationship between our enrollees, the Cornell Vegetable Program team, and Cornell University.

We're interested in your comments. Contact us at:
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This is the last weekly issue of VegEdge for the season. Our next issue of VegEdge newsletter will be produced on October 4, 2023 as we return to a monthly production schedule for the winter months.

Accumulated Growing Degree Days, 9/4/23

Julie Kikkert, CCE Cornell Vegetable Program

Accumulated Growing Degree Days (AGDD)
Base 50°F: April 1 - September 4, 2023

Location**	2023	2022	2021
Albion	2194	2670	2538
Appleton	2069	2261	2300
Arkport	1823	2046	1969
Bergen	2049	2288	2270
Brocton	2050	2304	2314
Buffalo*	2204	2371	2492
Ceres	1805	1924	2045
Elba	1972	2162	2156
Fairville	2024	2213	2202
Farmington	2068	2213	2247
Fulton*	2066	2207	2193
Geneva	2178	2315	2296
Hammondsport	1980	2206	2169
Hanover	2008	2283	2290
Jamestown	1793	1964	2010
Lodi	2256	2511	1881
Lyndonville	2135	2203	2285
Niagara Falls*	2286	2485	2441
Penn Yan*	2114	2379	2393
Rochester*	2153	2358	2336
Romulus	2213	2383	2369
Sodus	2238	2397	2384
Versailles	1975	NA	NA
Waterport	2084	2262	2283
Williamson	1963	2180	2169

* Airport stations
** For other locations: http://newa.cornell.edu

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field for many years following application and have proven successful for limiting other highly destructive insects. Over the past seven years, results from trials testing these persistent EPNs at multiple farm locations in Eastern NY growing sweet potatoes have shown significant reduction, between 36% and 80%, in wireworm damage in EPN treated plots when compared to untreated plots.

An advantage of using NY persistent EPN strains is that they are applied a single time and can be applied anytime during the growing season when soil temperatures are above 50°F. Ideally, nematodes should be applied when there are hosts in the soil so they can immediately go to work and reproduce. However, the NY persistent strains can sit and wait for months before needing to attack hosts and reproduce. Other commercial strains may persist in the soil for only 7-30 days and require application timing to be closely matched with the presence of their target host and an annual reapplication is required.

One of the most practical ways to manage wireworms is to keep grasses out of fields, especially June through August. However, this tactic does not necessarily work with growers' soil health goals using grass-based cover crop and small grain rotations. Treating soils with EPNs can provide a reasonable level of wireworm suppression and can be combined with cultural and chemical control strategies to produce marketable crops in fields with known wireworm pressure.

For more specific information on obtaining and applying persistent biocontrol nematodes, see "Are Persistent Biocontrol Nematodes (Entomopathogenic) a Fit for Your Organic Farm?"

Persistent biocontrol nematodes arrive in wax worm hosts and need to be rinsed out through a strainer into tank water. *Photo: Teresa Rusinek, CCE*

Biocontrol nematodes can be applied with a wide array of equipment such as backpack sprayers for small areas or boom sprayers for larger acreage. Several farmers have used a water tank mounted on an ATV or tractor and made a gravity flow boom from PVC pipe. *Photo: Teresa Rusinek, CCE*

Highlights from 2022 Alternaria Leaf Spot Fungicide Trial in Broccoli: FRAC 3, 7 and 11 Still the Best; Oso Best for Organic—As Good as Bravo

Christy Hoepting, Cornell Cooperative Extension, Cornell Vegetable Program

Fall Trial with Low Disease Pressure *(Hoepting et al. 2022)*

- Small-plot trial located at Cornell Agri-Tech research farm.
- 'Emerald Crown' broccoli, known to be susceptible to Alternaria leaf spot (ALS) and head rot.
- Conventional and organic products tested in same trial.
- 9 weekly sprays from September 10 to November 2, 2022, initiated after onset of disease.
- Trial artificially inoculated on October 6 when broccoli beginning to head and again on October 21 when broccoli heads were up to 2 inch in diameter.
- Incidence of head rot caused by Alternaria leaf spot (ALS) was only 15% in the nontreated.
- Most useful data collected from counting number of ALS spots/plant 6 days after the last fungicide spray.
- The nontreated averaged 121 ALS spots/plant.

FRAC 3, 7 and 11 Conventional Fungicides Performed the Best

- Luna Sensation (FRAC 7 + 11), Velum Prime (FRAC 7 in Luna Sensation), Quadris Top (FRAC 3 + 11), Quadris (FRAC 11 in Quadris Top) and Inspire (FRAC 3 in Quadris Top) resulted in 74-83% reduction in ALS spots/plant compared to the nontreated with no significant differences among them (Fig. 1).
- Other premixes that resulted in excellent control of ALS and head rot in previous Cornell trials include Priaxor (FRAC 7 + 11), Miravis Prime (FRAC 7 + 12) and Inspire Super (FRAC 3 + 9).
- In previous trials (Hoepting et. al. 2018, 2021), premixes usually had lower disease than their single active ingredient counterparts.
    - This has especially been the case for Quadris (FRAC 11) and Quadris Top (FRAC 3 + 11) with Quadris Top being more effective than Quadris.

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- We recommend using top-performing products when risk of disease is high, such as during head formation.

Caution! FRAC 7 Endura Failed to Control ALS and Head Rot in 2023 Trial

- Although the data has not been analyzed yet, FRAC 7 Endura (a.i. boscalid) completely failed to control ALS and head rot in a summer fungicide trial conducted at Cornell Agri-Tech in 2023 under high disease pressure (Hoepting et. al.) (Fig. 1).
- The 2023 trial was artificially inoculated with a different strain of ALS than the one used in 2021 and 2022 trials, which was likely insensitive to ALS prior to the start of the fungicide trial.
  - The insensitive strain was collected from New York within the past couple of years. Plans are to test this strain and others for fungicide sensitivity to FRAC 7 fungicides. Stay tuned!
- In a related disease in New York, Stemphylium leaf blight (SLB) of onion, FRAC 7 Endura was the first FRAC 7 active ingredient (a.i.) to which SLB developed fungicide resistance, while other fungicides with FRAC 7 a.i.s that belonged to different sub-classes of FRAC 7 (e.g. Luna Tranquility and Merivon) were the most effective treatments in the trial.
  - Although within 2 years, SLB developed resistance to these active ingredients too (same FRAC 7 a.i.s that are in Luna Sensation and Priaxor).
- **To prevent ALS from developing fungicide resistance to FRAC 7, growers should not use more than 2 applications of FRAC 7 fungicides per brassica crop.**

Bravo has Mediocre Activity—Not as Good as Top-Performing Fungicides

- In the majority of ALS fungicide trials, Bravo resulted in about 50% less ALS than the nontreated.
- Bravo generally results in significantly less disease than the nontreated, but significantly more disease than the top-performing products (FRAC 3, 7 & 11 premixes).
- We recommend using Bravo when disease pressure is low or as a preventative application, such as prior to canopy fill.

Oso is the Best Organic Option—as Good as Bravo

- Oso resulted in 41-64% fewer ALS spots/plant than the nontreated, which was not significantly different than Bravo.
- There were no significant differences between the 6.5 fl oz/A and 13 fl oz/A rates of Oso.
  - In previous trials, the higher rate had numerically less ALS.
- There was no consistent improvement in efficacy when Oso was used with Dyne-Amic or NuFilm-P adjuvants, both of which have penetrating properties.

Figure 1. 2023 Alternaria leaf spot and head rot fungicide evaluation at Cornell Agri-Tech in Geneva: summer trial with high disease pressure. Top: Nontreated control had spotted leaves and rotten heads. Middle: Quadris Top was one of the top-performing treatments with clean foliage and marketable heads. Bottom: Organic copper-based option, Cueva resulted in reduced ALS spots on the foliage but was not as good at keeping the disease out of the heads. *Photos: Christy Hoepting, CCE*

Be Aware of Phytotoxicity when Kocide 3000-O Used with Adjuvant During Cool Fall Conditions

- Although not severe (10% or less), phytotoxicity in the form of leaf necrosis occurred when Kocide 3000-O, a copper-based fungicide was used with Dyne-Amic and Nufilm-P adjuvants.
  - In this trial, Kocide 3000-O alone also resulted in some phytotoxicity (4%).
  - Similarly, another copper-based fungicide Cueva resulted in 2% phytotoxicity.
- This was the only time in 5 trials that we observed phytotoxicity with copper-based products.
- Generally, risk of copper phytotoxicity is associated with the use of oil-based adjuvants with copper-based fungicides or sanitizers when temperatures are > 90 degrees.
  - In this late-planted fall trial, we suspect that the cool and cloudy conditions, especially those following evening sprays, delayed the time it took the sprays to dry on the foliage resulting in necrosis.
- In the 2022 fall trial, any of the treatments that resulted in leaf necrosis had similar or even higher levels of ALS than the nontreated.

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- In the absence of phytotoxicity, we've had mixed results from copper-based products (Kocide 3000-O, Badge, Cueva) with ALS control ranging from none to 70% with it being most effective under low pressure (Fig. 1).

Organic Products Tested in Cornell Trials that Failed to Control ALS

These include:

- FRAC P06 – Lifegard, inconsistent performance
- FRAC BM02 - Double Nickel and Theia
- FRAC P05 – Regalia
- FRAC M2 – Microthiol Disperss
- a.i. potassium bicarbonate – Carb-O-Nator

Cornell does not recommend these products.

Revised Fungicide "Cheat Sheet" for Alternaria Leaf Spot and Head Rot in Broccoli and Other Cole Crops, 2023

Now available on the CVP website (CVP.CCE.CORNELL.EDU), the 2023 Fungicide "Cheat Sheet" for ALS and Head Rot in Broccoli and Other Cole Crops includes:

- ✓ Conventional and organic fungicides that have been field tested in 7 fungicide trials in broccoli from 2018-2022
- ✓ Relative performance ratings for control of ALS
- ✓ Active ingredient(s)
- ✓ FRAC groups
- ✓ Rating for risk of fungicide resistance
- ✓ Pre-harvest interval
- ✓ Use restrictions (e.g. NYS-restricted)
- ✓ **Many tips on how to build a successful fungicide program for ALS and downy mildew that adheres to best fungicide resistance management.**

Sweet Corn Pheromone Trap Network Report, 9/5/23

Marion Zuefle, NYS Integrated Pest Management Program, Cornell; https://sweetcorn.nysipm.cornell.edu/

Statewide, 27 sites reported this week. European corn borer (ECB)-E was caught at 4 sites and ECB-Z was also caught at 11 sites. Corn earworm was caught at 26 sites, with 24 sites showing counts high enough to warrant a 3, 4, 5, or 6-day spray schedule (refer to the table below). CEW eggs are usually very difficult to scout for but, at sites with high pressure, you can probably find eggs on the silks. Fall armyworm (FAW) was caught at 6 sites, and Western bean cutworm (WBC) was caught at 4 sites.

Average Corn Earworm Catch			Days Between Sprays
Per Day	Per Five Days	Per Week	
<0.2	<1.0	<1.4	No spray (for CEW)
0.2-0.5	1.0-2.5	1.4-3.5	6 days
0.5-1.0	2.5-5.0	3.5-7.0	5 days
1-13	5-65	7-91	4 days
over 13	over 65	over 91	3 days

Add one day to the recommended spray interval if daily maximum temperatures are less than 80°F for the previous 2-3 days.

WNY Pheromone Trap Catches: September 5, 2023

Location	ECB-E	ECB-Z	ECB Hybrid	CEW	FAW	WBC
Batavia (Genesee)	0	0	NA	43	0	1
Bellona (Yates)	0	3	3	99	0	0
Eden (Erie)	0	0	NA	79	0	0
Geneva (Ontario)	0	10	0	19	0	0
Hamlin (Monroe)	0	3	NA	276	0	0
Leroy (Genesee)	0	0	NA	1	0	0
Lyndonville (Orleans)	0	7	NA	44	0	1
Oswego (Oswego)	0	0	NA	38	0	0
Panama (Chautauqua)	NA	NA	NA	NA	NA	NA
Penn Yan (Yates)	0	0	6	24	0	NA
Portville (Cattaraugus)	NA	NA	NA	NA	NA	NA
Ransomville (Niagara)	0	2	NA	17	0	4
Stanley (Ontario)	0	2	0	55	0	0
Williamson (Wayne)	0	0	NA	139	3	0

ECB: European Corn Borer; CEW: Corn Earworm; FAW: Fall Armyworm; WBC: Western Bean Cutworm

Testing for Soybean Cyst Nematode

Marion Zuefle, NYS Integrated Pest Management Program, Cornell

Soybean cyst nematode is a plant-parasitic roundworm that is a major pest and considered the pest of greatest economic concern in soybeans. It has multiple hosts including dry beans and can cause comparable damage in dry beans. Soybean cyst nematode can reduce yield by feeding inside the roots. The young nematodes cause nutrients to divert away from the plant and towards the nematode. This results in slowed root growth and decreased uptake of water and nutrients from the roots to the shoots. The typical aboveground symptoms caused by soybean cyst nematode are stunting of plants in irregular patches throughout the field, yellowing and wilting. However, yield loss can occur without obvious aboveground symptoms. The only way to know for sure that soybean cyst nematode is in a field and at what level is to test. So far, we tested 27 different dry bean fields in western NY in 7 different counties. Of those, 14 fields and six counties were positive.

Testing

1. Soil Test

- Sample in the fall near time of harvest.
- Collect 10 sub-samples (for each 10-acre section) from top 8 inches of soil nearest the root zone.

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- The 10 sub-samples should come from entryways, low yielding areas, low areas in field, previously flooded areas, near buildings, storage areas, and fences.
- Mix the sub-samples and send a pint-sized sample to a testing lab such as SCN Diagnostic Lab.
- Retest every three years.

2. Visual Test

- Mid-July to early September
- Dig up plants to look at the roots. Do not pull them, this could knock the cysts off.
- Select plants from entryways, low yielding areas, low area in field, previously flooded areas, near buildings, storage areas, and fences.
- Gently remove the soil and look for cysts on the root.

Soybean cyst nematode cysts on roots. *Photo: Craig Grau, University of Wisconsin*

Management

- Crop rotation to non-host crop can decrease soybean cyst nematode levels by 50% the following year.
- Clean equipment before moving to another field.
- Plant more tolerant dry bean varieties (blacks like Eclipse, Jaguar, and Condor).
- Seed treatments, costly, with benefits seen mainly in areas with high soybean cyst nematode levels (>10,000 eggs/cup of soil)

Total yield loss depends on soybean cyst nematode population density, soil texture, fertility, and rainfall. In addition to yield loss, nematode feeding allows for the entry of soil-borne pathogens into the root. Symptoms are often confused with other potential issues such as nutrient deficiencies, herbicide damage, and environmental stress. The symptoms are most severe when plants are under stress, such as during times of drought, and are often misdiagnosed.

After feeding, a female will develop into a cyst that houses 400+ eggs. The cyst can survive in the soil for more than 10 years. Once soybean cyst nematode is present in a field it is impossible to eradicate. Therefore, management to reduce the number below the economic threshold is the only option.

CROP Insights

Observations from the Field and Research-Based Recommendations

BEETS

Harvest of the processing beet crop for Seneca Foods is about 60% complete and quality has been good overall. There has been some root decay in wetter areas of our region. In several fields the leaves are purple because of stress. Some fields are in dry areas and the leaves are wilting in the early week heat.

The Cercospora leaf spot (CLS) Decision Support System indicates low risk of infection in most of the area early this week, with moderate risk later in the week (Table 1). Rain splash can spread spores throughout a field. Continued leaf wetness within a canopy in areas that receive rainfall or irrigation also increases the risk of infection. – JK

Table 1. Cercospora Leaf Spot 2-Day Risk
Risk of Cercospora leaf spot on table beet from September 3 to September 8 using a forecasting model. Risk classification of CLS is based on cumulative 2-days/risk, and the forecast is based on weather data from Network for Environmental and Weather Applications (NEWA) models.

	achieved			forecast		
Location	Sept 3	Sept 4	Sept 5	Sept 6	Sept 7	Sept 8
Albion	0	0	2	3	**4**	**6**
Bergen	0	0	1	3	**4**	**4**
Elba	2	2	3	**5**	**4**	**4**
Geneva	0	0	1	3	3	**4**
Lyndonville	2	3	3	**5**	**5**	**5**
Medina	0	0	1	1	3	**6**
Sodus	0	0	0	1	3	**5**
Sodus (Lake)	1	1	0	1	**4**	**6**
Waterport	1	1	2	3	**4**	**6**

Low ≤ 3; Moderate 4 to 6; High ≥ 7.
Data from newa.cornell.edu accessed 9:00 am on 9/6/2023.

COLE CROPS

This week's hot weather will speed maturity of broccoli and cauliflower—varieties that do not tolerate heat well may bolt or develop other issues such as brown or yellow bead. Continuing to see Alternaria leaf spot in brassicas, particularly broccoli and cabbage. Black rot, characterized by V-shaped necrotic lesions on leaf margins, is affecting some cabbage plantings. Noticed an increase in cabbage aphids this week, with honeydew and sooty mold beginning to accumulate in weedy spots of fields. Check for indications that natural enemies may be at work—if you see high numbers of brown or gold bloated aphids, treatment may not be needed. – SC

September is often the time of year that increases occur in Alternaria leaf spot (ALS) and head rot caused by fungal pathogen *Alternaria brassicicola* specific to brassica/crucifer/Cole crop including broccoli, cabbage, cauliflower, Brussels sprouts, kale, etc. Optimum temperatures for ALS are 75° to 82°F, but when leaf wetness is prolonged for 20 hours of more, ALS can produce many spores outside of the optimum range of temperatures. Heavy dews of late August through September and remnants of hurricanes usually result in favorable conditions for both ALS. It can survive in soil and crop debris and can be spread onto plants from splashing soil and over longer distances aerially. See article on page 3. – CH

DRY BEANS

Many beans have been or will be desiccated in the next few weeks. White mold has been a problem in some of the denser fields in the past few weeks. Bacterial blight continues to spread through some later planted fields as well. – ML

ONIONS

Current hot and dry weather conditions have dried the crop in a hurry. Rolling, pulling and harvest are underway. – CH

Last Friday and Saturday Christy Hoepting toured muck onion growers through her on-farm fungicide trials for control of leaf diseases in Elba muck and in Wayne Co. The growers (in this photo: Eric Tuttle, Garret Williams, Rane Sorbello, Dylan Sorbello and David Sorbello at the Wayne Co. trial hosted by Williams) were very happy to see the discovery of a new product that provided excellent control of Botrtyis leaf blight necrotic spots and Stemphylium leaf blight. In this picture you can see how healthy the foliage is in this new treatment compared to the disease-ravaged onion foliage in the background. *Photo: Christy Hoepting, CCE*

POTATOES

More late blight was found in NYS this past week in Ontario County on tomato. Be sure to monitor any potatoes that have not been vine killed yet, and if you suspect you have late blight in your potatoes, this late in the season vine killing the field will be the best option for control.

With drier weather this past week, most locations have not reached the 30 blight units (BU) needed to trigger a spray for late blight (Table 2). However, with the levels of late blight in NY this year, it is important to maintain a consistent fungicide program until vines have died. If the weather station closest to you has not yet reached 30 BU and the forecast indicates that it will in the next 2-3 days,

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a spray is still recommended. The table assumes use of a susceptible potato variety Reba, and an application of chlorothalonil on August 30. For locations that are not close to a weather station, forecast information should only be used as a general indication of how favorable weather has been for late blight. New late blight has been reported in Ontario County, NY. Past reports in NY include Onondaga, Tompkins, and Yates County, NY. Late blight has also been found in Ontario Canada and North Carolina this year. – ML

Table 2. Late Blight Risk Chart, 9/6/23

Location	Blight Units 8/30-9/5[1]	Predicted Blight Units 9/6-9/8[2]
Albion	5	16
Arkport	14	30
Baldwinsville	20	37
Bergen	5	11
Brant	16	28
Buffalo	39	56
Burt	-	-
Ceres	28	40
Dansville	35	54
Elba	9	20
Fairville	10	27
Farmington	16	28
Fulton	47	64
Geneva	0	11
Hammondsport	4	16
Knowlesville	20	36
Lyndonville	20	36
Medina	3	14
Niagara Falls	28	45
Penn Yan	29	46
Rochester	28	45
Sodus	0	17
Versailles	11	23
Wellsville	34	54
Williamson	16	33

Calculated using a May 31 crop emergence date. Last fungicide application August 30 on susceptible cultivar Reba. Numbers in red indicate locations that have or will surpass the 30 BUs needed to trigger a fungicide application.

1 Past week Simcast Blight Units (BU)

2 Three-day predicted Simcast Blight Units (BU)

SNAP BEANS

Processing snap bean harvest continues, and the season is average thus far. Soil moisture conditions are highly variable in our region. Some white mold has been seen in the wetter portions of the area. – JK

SWEET CORN

Hot temperatures early this week will help ripen sweet corn. Northern corn leaf blight (NCLB) has been detected in several fields. Lesions of NCLB begin as grayish green and become tan as they mature. The slender oblong shape, with tapered ends, gives them a cigar or boat-shaped appearance (Fig. 1). Lesions range from 1 to 6 inches in length and may coalesce to cover the entire leaf.

Figure 1. Northern Corn Leaf Blight lesion. *Photo: Sarah Pethybridge, Cornell*

Spores are produced on the underside of the leaves and appear as dusty green fuzz. This week, I noticed that NCLB was becoming prominent in an older fresh market field that was well past the harvest period. Now is the time to destroy old plantings and crop residue to reduce spore production from the pathogen. The fungus that causes NCLB survives as spores or mycelia on corn debris over the winter. The inoculum can be splashed onto the current corn crop or can arrive by wind. Early infections come from within the field and are more damaging. As the season progresses and the numbers of spores in the air increases, all fields become susceptible. Infection is favored by leaf wetness and cool weather as is typical later in the growing season. Resistant varieties and cultural practices to reduce inoculum are the best management practices. – JK

TOMATOES

Tomatoes leaf curling or rolled up? Tomato leaves rolled up indicates the plant is stressed and it can be due to numerous factors such as temperature, moisture, nutrient deficiencies, excessive fertilization, pruning damage, herbicide damage, pests and diseases, or a combination of the above. So how to start narrowing down? I take a big picture look of the planting and ask where are symptoms occurring—older leaves, newer leaves, all over? Is plant growth stunted? I take a closer look at the leaves to see if there is discoloration or spots. I make sure to flip leaves over and check for any pests that can be present such as aphids or whiteflies. Certain diseases have leaf curling as a symptom, see Aug 16 VegEdge for Elizabeth's article on tomato diseases with helpful identification tips. Certain cultivars are more prone to leaf roll as well. Leaf roll in tomatoes is fairly common and typically caused by environmental factors – seeing leaf roll does not necessarily affect yield or fruit quality. If you see it, I encourage you to take a closer look! – LK

Figure 2. Tomato plant exhibiting leaf roll on older leaves. *Photo: Lori Koenick, CCE*

Two-spotted spider mites (TSSM) thrive in hot, dry weather; this week noticed some TSSM activity in field tomatoes. Look for these tiny creatures on the undersides of leaves and for yellow scorching on leaf surfaces. A hand lens can be helpful in identifying these mites, which have 2 body segments and 4 pairs of legs. – SC

Upcoming Events

Sustainable Agricultural Mulch Films Webinar

September 7, 2023 (Thursday) | 6:00 - 7:30 pm EST
FREE webinar via Zoom

This webinar is aimed at growers who use, or plan to use polyethylene (PE) plastic mulch in their farm operation.

A team of RIT researchers and engineers has partnered with specialists from Cornell Vegetable Program and CCE of Monroe County to design mulching film with an accelerated biodegradation rate. Using innovative techniques such as plasma treatment and pre-tillage microbe inoculation they have formulated and field-tested this new material and would like to share updates with you during the webinar. Come and hear their findings, ask questions and provide feedback.

Zoom link to join: https://rit.zoom.us/j/94670028835?pwd=OUUzR1plNGZhd1BzY2xEdnJaZlN4QT09

Zoom ID: 946 7002 8835

Passcode: 121676

Field Walk (Clymer, NY)

September 12, 2023 (Tuesday) | 6:30 - 8:00 pm
8868 Cherry Hill Rd, Clymer, NY 14724

Free! RSVP not required. For more info, contact Elizabeth Buck at 585-406-3419

Field Walk (Wellsville, NY)

September 13, 2023 (Wednesday) | 6:00 - 7:30 pm
1086 Fortner Rd, Wellsville, NY 14895

Free! RSVP to Elizabeth Buck at 585-406-3419

2023 Dry Bean Twilight Meeting

September 26, 2023 (Tuesday) | 5:30 - 7:00 pm with pizza dinner available at 5:00 pm
Cornell AgriTech, 1097 County Rd 4, Geneva, NY 14456

Come learn about updates in insect monitoring, white mold management, and weed resistance management, as well as view this year's dry bean variety trial plot to see how well different varieties have performed this season. 1.5 DEC credits will be available in 10, 1a, 21, and 23. FREE!

To ensure you receive updates about this meeting, please email Margie Lund at mel296@cornell.edu.

Cornell Cooperative Extension
Cornell Vegetable Program

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VegEdge is the highly regarded newsletter produced by the Cornell Vegetable Program. It provides readers with information on upcoming meetings, pesticide updates, pest management strategies, cultural practices, marketing ideas, and research results from Cornell University and Cornell Cooperative Extension. VegEdge is produced every few weeks, with frequency increasing leading up to and during the growing season.

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